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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/533,414	04/29/2005	Brent Daniel Rogers	6682-66957-02	4172
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CARGILL, INCORPORATED LAW DEPARTMENT P. O. BOX 5624 MINNEAPOLIS, MN 55440-5624			EXAMINER HENRY, MICHAEL C	
			ART UNIT 1623	PAPER NUMBER
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/533,414	<b>Applicant(s)</b> ROGERS ET AL.	
	<b>Examiner</b> MICHAEL C. HENRY	<b>Art Unit</b> 1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 28 February 2008.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 6-18 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 6-18, 25-27 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892)                     | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

### **DETAILED ACTION**

The amendment filed 02/28/08 affects the application, 10/533,414 as follows:

1. Claims 6, 10, 13, 14, 16, 18 have been amended. Claims 22-24 have been canceled.

Applicants' amendments have overcome the rejections made under 35 U.S.C. 112, second paragraph. Consequently, the said rejections are withdrawn. However, the rejections made under 35 U.S.C. 103(a) and 35 U.S.C. 102/103 are maintained.

2. The responsive to applicants' arguments is contained herein below.

Claims 6-18, 25-27 are pending in application

#### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 6-9, 18, 25 are rejected under 35 U.S.C. 103(a) as being unpatentable over Matahira et al. (EP 1075836 A2).

In claim 6, applicant claims a method of preparing a beverage, comprising adding at least about 0.01g NAG per serving to the beverage to form a NAG beverage, wherein a serving is about 8 ounces; and heat pasteurizing the NAG beverage at a temperature of least about 160°F, wherein at least about 70% of the NAG remains in the NAG beverage after the heat pasteurizing. Claims 7-8, 25, are drawn to the method of claim 6 wherein the NAG beverage is heat pasteurized at specific temperature range and wherein the amount of NAG present in the beverage is a specific amount of mg per serving. Claim 9 is drawn to the method of claim 6,

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wherein the NAG present is derived from a specific source. Claim 18 is drawn to a method of preparing a beverage, comprising: deriving NAG from a fungal biomass containing chitin or bacteria that produce NAG; adding at least about 0.01g NAG per serving to a beverage to form a NAG beverage; wherein a serving is about 8 ounces; and heat pasteurizing the NAG beverage at a temperature of least about 160°F, wherein at least about 0.007g NAG per serving remains in the NAG beverage after heat pasteurizing.

Matahira et al. disclose a method of preparing a beverage (a drink), comprising adding NAG derived from chitin to a beverage to form a NAG beverage (a beverage containing NAG), wherein the NAG beverage comprises at least about 0.01 g NAG (i.e., 1000 mg or 1 g) and wherein the NAG (see page 14, example 10). Matahira et al. disclose that their beverage can be prepared by conventional method (see page 14, example 10).

The difference between applicant's claimed method and the method of Matahira et al. is that Matahira et al. do not heat-pasteurize their beverage. However, it common in the art to pasteurize (heat-pasteurize) a beverage or other food in order to kill undesired microorganisms such as bacteria, viruses, protozoa, molds or yeast that could cause disease, spoilage, or undesired fermentation and to protect the consumer's health (see Shahani et al.'s abstract and McFarren et al.'s abstract). In addition, the pasteurization at temperatures of at least 160°F or more (e.g., 250 °F) are also common in the art (see Shahani et al.'s abstract and McFarren et al.'s abstract). This fact is supported by applicant who discloses that heat pasteurization is used to reduce the presence of undesirable microorganisms and disclose high temperatures that are typically used in heat-pasteurization (see page 4, last two paragraphs of applicant's specification).

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It would have been obvious to one having ordinary skill in the art, at the time the claimed invention was made to have used the method of Matahira et al. to prepare a beverage comprising NAG and to heat-pasteurize said beverage so as to kill any microorganisms present that could cause disease or spoilage and to protect the consumer's health.

One having ordinary skill in the art would have been motivated, to use the method of Matahira et al. to prepare a beverage comprising NAG and to heat-pasteurize said beverage so as to kill any microorganisms present that could cause disease or spoilage and to protect the consumer's health. It should be noted that the source of the NAG used as recited in claims 9 and 18 does render applicant's NAG different from Matshira et al.'s NAG. Furthermore, the use of specific temperature of heat-pasteurizing depends on factors such as the time of heating and the type and amount of microorganisms that may be present in said composition.

***Claim Rejections - 35 USC § 102/103***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 10-17, 26, 27 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Matahira et al. (EP 1075836 A2).

In claim 10, applicant claims a food product comprising: a NAG food product comprising from about 1 g NAG/1000 g of food product to about 1 g NAG/0.1 g of food product, wherein the NAG food product is at a temperature of at least about 160°F; and an absence of shellfish proteins. Claim 11 is drawn to said food product wherein the food product is as a specific temperature range. Claim 12 is drawn to said food product wherein the food product is a flour- or grain-based product. Claim 13 is drawn to said food product wherein the food product comprises a specific range of grams of NAG per specific grams of food product.

Matahira et al. disclose a food product (cookie) comprising NAG (see page 13, Table 12). Matahira et al. do not explicitly disclose the grams(g) of NAG per specific grams of their final food product (e.g., 1 g NAG/1000 g of food product or 1 g NAG/0.1 g of food product). But, the silence of Matahira et al. does not mean that their composition does not contain the same said grams of NAG per specific grams of food product as that in the food product claimed by applicant. It should be noted that Matahira et al.'s composition or food product may very well have the same grams(g) of NAG per specific grams of food product as that claimed by applicant for their product especially since Matahira et al.'s composition or product when mixed (i.e., before heating) has the same grams(g) of NAG per specific grams as applicant's claimed food product (see page 13, Table 12). Matahira et al. anticipates the claims if their composition has the same grams of NAG per grams of food product. Matahira et al. renders the claims as being obvious if the grams of NAG per grams of food product in their composition is substantially close to the grams of NAG per grams of food product in applicant's composition. Claims 11 and 12 are also encompassed by this rejection since Matahira et al. silence with respect to the temperature of the food product does not mean that their composition does not have the same

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temperature as applicant's composition, and since Matahira et al.'s food product is also a flour-based product (see page 13, Table 11). Claim 13 is also encompassed by this rejection since the Matahira et al.'s final food product may well comprise the same grams of NAG per specific grams of food product as applicant's (as set forth above). It should be noted that the temperature of the NAG food product (or the temperature at which the NAG food product is present) does not render the NAG food product different from one that is at a different temperature.

In claim 14, applicant claims a method of preparing a food product, comprising adding NAG to a food product to form a NAG food product, wherein the NAG food product comprises from about 1 g NAG/1000 g of food product to about 1 g NAG/0.1 g of food product; and heating the NAG food product to a temperature of at least about 160°F, wherein at least about 70% of the NAG remains in the NAG food product after the heating. Claims 15-17 are drawn to the method of claim 14 wherein heating involves baking, broiling or boiling, wherein the NAG present in the food product is a specific amount of grams per specific grams of food product and wherein the food product is heated at to at least a specific temperature. Claim 26 and 27 are drawn to the method of claim 14 wherein the NAG present is derived from a specific source and wherein specific amount of NAG remains after heating.

Matahira et al. disclose a method of preparing a food product (a cookie), comprising adding NAG derived from chitin to a food product to form a NAG food product (a product containing NAG), wherein the NAG food product comprises at least about 0.01 g NAG (i.e., 80 g) and wherein the NAG food product is heated (see page, 13, example 7). Matahira et al. disclose that their product is prepared by a conventional method (see page, 13, example 7).

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Matahira et al. do not explicitly disclose the grams(g) of NAG per specific grams of their final food product (e.g., 1 g NAG/1000 g of food product or 1 g NAG/0.1 g of food product) nor the temperature of heating. But, the silence of Matahira et al. does not mean that their composition does not contain the same said grams of NAG per specific grams of food product as that in the food product claimed by applicant and that their composition was not heated at the same said temperature. It should be noted that Matahira et al.'s composition or food product may very well have the same grams(g) of NAG per specific grams of food product as that claimed by applicant for their product especially since Matahira et al.'s composition or product when mixed (i.e., before heating) has the same grams(g) of NAG per specific grams as applicant's claimed food product (see page 13, example 7, Table 12). Also, it should be noted that since Matahira et al.'s NAG food composition is a cookie then the said composition must have been heated at a temperature of at least 160°F by baking. Matahira et al. anticipates the claims if their composition or food product has the same specific grams of NAG per specific grams food product and is heated at the same temperature. Matahira et al. renders the claims as being obvious if the grams of NAG per per specific grams food product and the temperature of heating of their composition is substantially close to the grams of NAG per specific grams food product and the temperature of heating of applicant's composition. It should be noted that claims 26 and 27 are also encompassed by this rejection since amount source of the NAG does not limit further limit the composition claimed and the silence of Matahira et al. with respect to the amount NAG remaining does not mean that Matahira et al.'s composition does not contain the same said amount.

***Response to Arguments***



Applicant's arguments with respect to claims 6-18, 25-27 have been considered but are not found convincing.

The applicant argues that Matahira *et al.* do not disclose heat pasteurization of a NAG-containing beverage or how much NAG would remain if the beverage were so heated. However as set forth in the above rejection, it common in the art to pasteurize (heat-pasteurize) a beverage or other food in order to kill undesired microorganisms such as bacteria, viruses, protozoa, molds or yeast that could cause disease, spoilage, or undesired fermentation and to protect the consumer's health (see Shahani *et al.*'s abstract and McFarren *et al.*'s abstract). In addition, the pasteurization at temperatures of at least 160°F or more (e.g., 250 °F) are also common in the art (see Shahani *et al.*'s abstract and McFarren *et al.*'s abstract). This fact is supported by applicant who discloses that heat pasteurization is used to reduce the presence of undesirable microorganisms and disclose high temperatures that are typically used in heat-pasteurization (see page 4, last two paragraphs of applicant's specification). Furthermore, the silence of Matahira *et al.* with respect to the amount NAG remaining does not mean that Matahira *et al.*'s composition does not contain the same said amount.

The applicant argues that although pasteurization to kill microorganisms is commonly known, as discussed in the current application, the industry has followed the belief that exposure of glucosamine to relatively high temperatures inactivates glucosamine. In fact, U.S. Patent No. 6,423,929 teaches that beverages containing glucosamine are prepared using a two-step process to minimize chemical alteration of glucosamine. In a first step, a juice drink base is heat pasteurized. In a second step, a separate glucosamine solution is heated at a temperature of below 160°F to prevent inactivation of glucosamine and subsequently added to the juice drink base.

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(Page 2, 11. 1-9). Thus, it would not have been obvious to one of ordinary skill in the art to prepare a beverage containing NAG and then to heat-pasteurize the beverage. Therefore, based on what was known in the art, it cannot be assumed that the beverages in Matahira *et al.* were exposed to temperatures of at least 160°F. However, it appears that there is a typographical with respect to the referenced U.S. Patent No. 6,423,929 (it appears that applicant meant to refer to another US Patent) since U.S. Patent No. 6,423,929 subject is not drawn to glucosamine nor NAG but to a device for the laser processing of flat workpieces. Furthermore, the claims in the instant application is drawn to NAG (not to glucosamine) and thus a referenced patent disclosing subject matter that is drawn to glucosamine would not be a relevant or persuasive. In addition, it is common in the art to pasteurize (heat-pasteurize) a beverage or other food in order to kill undesired microorganisms such as bacteria, viruses, protozoa, molds or yeast that could cause disease, spoilage, or undesired fermentation and to protect the consumer's health (see Shahani *et al.*'s abstract and McFarren *et al.*'s abstract). In addition, the pasteurization at temperatures of at least 160°F or more (e.g., 250 °F) are also common in the art (see Shahani *et al.*'s abstract and McFarren *et al.*'s abstract). This fact is supported by applicant who discloses that heat pasteurization is used to reduce the presence of undesirable microorganisms and disclose high temperatures that are typically used in heat-pasteurization (see page 4, last two paragraphs of applicant's specification).

The applicant argues that the Office action does not present any reference or evidence showing that (1) Matahira *et al.* expose their beverage to at least 160°F and (2) that if the beverage with NAG is so heated, at least 70% of the NAG remains. However as set forth in the above rejection, it is common in the art to pasteurize (heat-pasteurize) a beverage or other food in

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order to kill undesired microorganisms such as bacteria, viruses, protozoa, molds or yeast that could cause disease, spoilage, or undesired fermentation and to protect the consumer's health (see Shahani et al.'s abstract and McFarren et al.'s abstract). In addition, the pasteurization at temperatures of at least 160°F or more (e.g., 250 °F) are also common in the art (see Shahani et al.'s abstract and McFarren et al.'s abstract). This fact is supported by applicant who discloses that heat pasteurization is used to reduce the presence of undesirable microorganisms and disclose high temperatures that are typically used in heat-pasteurization (see page 4, last two paragraphs of applicant's specification). Furthermore, the silence of Matahira et al. with respect to the amount NAG remaining does not mean that Matahira et al.'s composition does not contain the same said amount. It should also be noted that the language "at least 70% of the NAG remaining" also reads on 100% NAG remaining.

The applicant argues that independent claims 10 and 14 recite, in part, heating or having the NAG food product at a temperature of at least about 160°F. however, it should be noted that the temperature of the NAG food product (or the temperature at which the NAG food product is present) does not render the NAG food product different from one that is at a different temperature. Also, it should be noted that since Matahira et al.'s NAG food composition is a cookie then the said composition must have been heated at a temperature of at least 160°F by baking.

The applicant argues that the silence of Matahira *et al.* with respect to the amount of NAG in the finished product does not imply that the final amount of NAG is the same as the amount initially added to the food product. However, the silence of Matahira et al. does not mean that their composition does not contain the same said grams of NAG per specific grams of

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food product as that in the food product claimed by applicant and that their composition was not heated at the same said temperature. It should be noted that Matahira et al.'s composition or food product may very well have the same grams(g) of NAG per specific grams of food product as that claimed by applicant for their product especially since Matahira et al.'s composition or product when mixed (i.e., before heating) has the same grams(g) of NAG per specific grams as applicant's claimed food product (see page 13, example 7, Table 12). Also, it should be noted that since Matahira et al.'s NAG food composition is a cookie then the said composition must have been heated at a temperature of at least 160°F by baking.

The applicant argues that there are well-known methods for preparing "no-bake" cookies. However, Matahira et al. disclose that their cookies can be prepared by conventional method (which includes baking) (see page 13, example 7).

**THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Michael C. Henry whose telephone number is 571-272-0652. The examiner can normally be reached on 8.30am-5pm; Mon-Fri. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Shaojia A. Jiang can be reached on 571-272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Michael C. Henry

June 22, 2008.

/Shaojia Anna Jiang, Ph.D./

Supervisory Patent Examiner, Art Unit 1623